

CLAIM AMENDMENTS

Claims 24, 36 and 37 have been amended to recite that the ΔE^* value is measured in accordance with the CIE $L^*A^*B^*$ color system, as helpfully suggested by the Examiner. This amendment finds antecedent basis in the specification at page 2, lines 26-28.

Claims 24 and 36 have been amended to recite that all of the components of the ionically complexed colorant compound are water soluble prior to being complexed with each other. Antecedent basis for this amendment is located at page 9, lines 23-24 and page 3, lines 21-23.

Claims 24 and 36 have been amended to replace the unnecessary term “predetermined ratio” with the term –ratio--.

It is respectfully submitted that none of the above amendments introduces new matter.

REMARKS

Claims 24-43 are pending in the application. Claims 38-41 and 43 have been withdrawn from consideration. Claims 1-23 have been cancelled.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 34-37 and 42, drawn to coloring compositions, classified in class 8, subclass 636.
- II. Claim 38, drawn to latex paints, classified in class 523, subclass 334.
- III. Claim 39 and 40, drawn to toners, classified in class 430, subclass 107.1.
- IV. Claim 41, drawn to inks, classified in class 106, subclass 31.31.
- V. Claim 43, drawn to methods of imparting color to surface, classified in class 8, subclass 636.

Applicants confirms the election of Invention I, claims 24-37 and 42 with traverse.

It is respectfully submitted that the claims all are related to coloring compositions in a format ready for application to a desired substrate. The coloring compositions comprise an ionically complexed colorant compound comprising

- i) an ionic dye component having an apparent color characteristic;
- ii) a first dye counterion component having a known color characteristic that exhibits a color difference from the ionic dye component of at least about 10 ΔE^* units measured in accordance with the CIE $L^*A^*B^*$ color system; and

- iii) a colorless counterion component. The ionic dye component is ionically complexed with the first dye counterion component and colorless counterion component in a ratio to form an ionically complexed colorant compound or compounds to provide a composition exhibiting a predetermined color. All of the components of the ionically complexed colorant compound are water soluble prior to being complexed with each other. The coloring composition also comprises a liquid carrier in which the ionically complexed colorant compound has a solubility of less than 100 parts per million.

It is respectfully submitted that, in view of this substantial commonality, the search for the subject matter of one of these groups will necessitate a search of the subject matter of the other groups. No substantial burden is therefore seen in consideration of these groups in a single application.

Claims 38, 39 41 and 42 are subgenus compositions of independent composition claim 24, wherein the components are functionally defined. These dependent composition claims should not be restricted from the claim in the same category of invention from which they depend.

The application as originally filed discloses the product and the process for using the product, and so therefore these claims are presented in dependent form in accordance with the rejoinder procedure outlined in MPEP 821.04 for consideration in this application. In view of the public interest in compact prosecution and early determination of patent rights, together with efficiencies both to the Applicants and the Patent Office, consideration of all claims presented in a single application is respectfully requested.

Claim Rejections – 35 USC § 112

Claims 24-37 and 42 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The expression “in a format ready for application to a desired substrate” has been objected to because the added limitation lacks literal antecedent basis in the specification, citing *Ex parte Grasselli*, 231 USPQ 393 (BD. App 1983) aff’d mem. 738 F. 2d 453 (Fed. Cir. 1984). The added limitation of the *Grasselli* case, however, is quite different from the present set of facts. In *Grasselli*, a negative limitation was added that did not appear in the specification and, in fact, was held to introduce a new concept to the application.

It is well established that applicant's specification need not describe the claimed invention in *ipsis verbis* to comply with the written description requirement. *Ex parte Sorenson*, 3 U.S.P.Q.2d 1462, 1463 (P.T.O. Bd. Pat. App. & Int’f 1987).

The expression “in a format ready for application to a desired substrate” does not introduce a new concept to the present application, because the specification specifically provides at page 10, lines that in a preferred embodiment, “the colorant is provided in a vehicle in liquid or paste form as a coatable colorant composition for application to a surface to impart a color, for example as a coating, ink or paint composition.” It is therefore apparent that applicants were in possession of the concept of providing a coloring composition in a format ready for application to a desired substrate at the time of filing of the present application, and that this concept was set forth in the specification as filed.

It is respectfully submitted that the present claim therefore was fully supported by the original disclosure, and meets the written description requirement.

Claims 24-37 and 42 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of the term “10 ΔE^* units” in certain claims without further definition has been rejected as being indefinite. The claims have been amended to recite that this value is determined by measuring in accordance with the CIE $L^*A^*B^*$ color system, as helpfully suggested by the Examiner.

Claims 24-37 and 42 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression “predetermined ratio” has been rejected as being indefinite. The claims have been amended to remove the unnecessary recitation of “predetermined” in this expression.

Claim Rejections – 35 USC § 103

Claims 24-37 and 42 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hall (U.S. Patent No. 4,130,435).

The present claims are directed to a coloring composition in a format ready for application to a desired substrate. The coloring composition comprises an ionically complexed colorant compound comprising

- i) an ionic dye component having an apparent color characteristic;
- ii) a first dye counterion component having a known color characteristic that exhibits a color difference from the ionic dye component of at least about 10 ΔE^* units measured in accordance with the CIE $L^*A^*B^*$ color system; and
- iii) a colorless counterion component. The ionic dye component is ionically complexed with the first dye counterion component and colorless counterion component in a ratio to form an ionically complexed colorant compound or compounds to provide a composition exhibiting a predetermined color. All of the components of the ionically complexed colorant compound are water soluble prior to being complexed with each other. The coloring composition also comprises a liquid carrier in which the ionically complexed colorant compound has a solubility of less than 100 parts per million.

Hall teaches the concept of forming a water-insoluble dye by reacting a water soluble cationic dye with a water soluble anionic dye. This reference, however, does not describe the concept of additionally using a colorless counterion to modulate the apparent color of the final colorant compound, and provides no reason to do so.

The Office Action points to Examples 5 and 6, noting that sodium hydroxide is in the solution, apparently asserting that this is the colorless counterion corresponding to the present claims. However, sodium hydroxide is not acting as a colorless counterion in the Hall reference. Rather, the use of sodium hydroxide (or for that matter, alkali in general) is common in the dye art for assisting in dissolving dyes that are difficult to dissolve.

This is in fact what Hall is using the sodium hydroxide for. See column 4, lines 41 “to dissolve the dye...”

In use, Hall teaches use of a two phase water/solvent system where water soluble dyes are mixed in a water phase, and the resulting water insoluble ink migrates to the solvent phase in which it is soluble to form a liquid dye solution. See the Abstract.

Hall does not describe the incorporation of a colorless counterion in the final colorant compound, and particularly does not describe the modulation of the apparent color of the ionically complexed colorant compound. For these reasons, Hall does not anticipate the present claims. Further, the skilled artisan would have had no reason to consider incorporating a colorless counterion in the final colorant compound from the Hall teachings, and would not have found the modulation of the apparent color of the ionically complexed colorant compound because Hall did not recognize a need or desirability to modulate the apparent color of the compound.

Claims 24-37 and 42 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mueller et al (U.S. Patent No. 2,922,690).

Mueller discloses a dyestuff for dyeing fabrics that contain mixtures of fibers, wherein the fibers are not capable of all being dyed by the same dye, but rather must be dyed by different dyestuffs. Specifically, Mueller teaches that polyacrylonitrile polymers are dyed by basic (cationic) dyestuffs, and natural or certain synthetic fibers are dyed by acidic (anionic) dyestuffs. No single conventional dyestuff can completely dye a fabric containing both types of materials. To solve this problem, Mueller formulates a colorant that is a combination of both cationic and anionic dyes that are dispersed for application in an aqueous dyebath. The fabric is treated in this dyebath, and the dyestuff salts dissociate so the cationic dye component can associate with the polyacrylonitrile polymers and the anionic dye component can associate with the natural or certain synthetic fibers. See column 3, lines 46-50.

Thus, Mueller teaches a system that requires that the colorant dissociate (and therefore is soluble) in water, which is the liquid carrier of the composition when applied to the fabric substrate. Mueller therefore does not meet the present claims, and the skilled artisan would have no reason to provide a coloring composition comprising a liquid carrier in which the ionically complexed colorant has a solubility of less than 100 parts per million.

Claims 24-37 and 42 have been rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Coughlin et al (WO 03/093373).

Coughlin discloses a composition for imparting improved rheology on pigment based inks and paints. Thus, Coughlin begins with an organic pigment starting material that is not soluble in water, and requires addition of water-soluble dyes as dispersants for the pigment, which “largely overcome the mentioned problems of conventional pigment compositions.” See the last paragraph of page 1.

The present invention avoids all problems with conventional pigment compositions by not including such pigment components. The claims have been amended to expressly recite that all of the components of the ionically complexed colorant compound are water soluble prior to being complexed with each other.

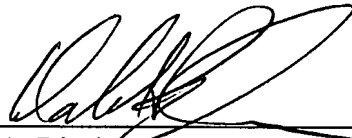
In view of the amendment, Coughlin does not anticipate or render obvious the present invention. More specifically, the skilled artisan would have had no reason to deviate from the central core of the teaching of Coughlin to exclude the required pigment as described therein to provide a radically different colorant composition as is presently claimed.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present application is now in condition for allowance. Early favorable consideration and passage of the above application to issue is earnestly solicited. In the event that a phone conference between the Examiner and the Applicant's undersigned attorney would help resolve any issues in the application, the Examiner is invited to contact said attorney at (651) 275-9811.

Respectfully Submitted,

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